# Southern California LNG Import Terminal Project



Supplying California with Safe, Clean, Reliable Natural Gas







#### **BHP Billiton – Diversified With a Global Reach**

#### **Carbon Steel Materials**



**Aluminium** 



**Base Metals** 

**Petroleum** 



Diamonds & Spec Prod





**Energy Coal** 



**Stainless Steel Materials** 



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#### **BHP Billiton Snapshot**

- BHP Billiton LNG, Inc., is a Subsidiary of BHP Billiton Ltd., One of the World's Largest Diversified Resources Companies
- 35,000 Employees Working in More Than 100 Operations in Approximately 20 Countries
- Market Cap: U.S. \$76 Billion (May '05)
- Industry or Near Industry Leader
  - Aluminum
  - Energy Coal and Metallurgical Coal
  - Copper
  - Ferro-Alloys
  - Iron Ore and Titanium Minerals
- Substantial Interest
  - Gas/Liquefied Natural Gas
  - Oil
  - Nickel
  - Diamonds
  - Silver





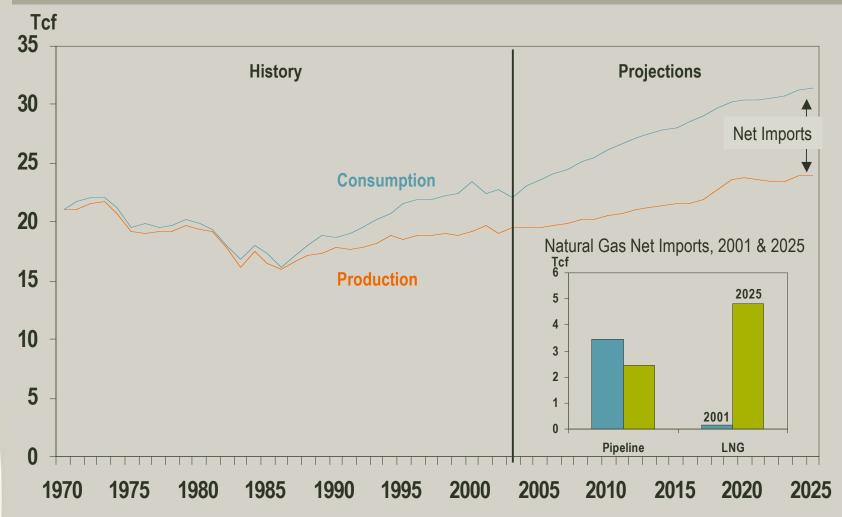
#### **Need for LNG**

- California Energy Commission's latest Natural Gas Assessment Cites the Future Need for Additional Supplies of Natural Gas for Californians
- Report Warns of Increasing Natural Gas Prices due to:
  - Continued growth in natural gas demand
  - Growing competition for supply with neighboring states
  - State not approving new LNG-import terminals
- Importing Natural Gas from Faraway Places May Be the Only Way to Hold the Line on Increasing Market Prices



# **Projected Demand Against Declining Supply EIA Natural Gas Projections Through 2025**





Source: Energy Information Administration (2004 Forecast)



#### Projected Decline in Natural Gas Imports EIA Natural Gas Projections Through 2025



Figure 89. Net U.S. imports of natural gas, 1970-2025 (trillion cubic feet)

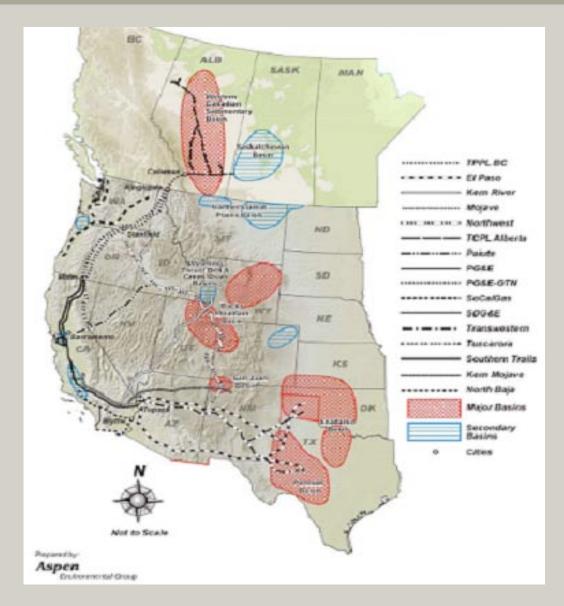


Source: Energy Information Administration (2004 Forecast)













#### **California Energy Profile - 2003**

#### **Petroleum**

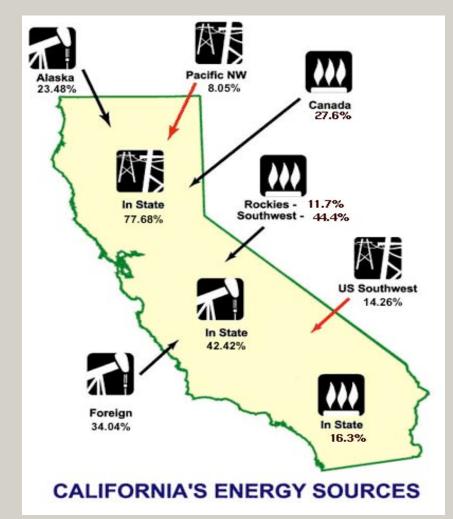
In State Production	42.4%
Alaska Imports	23.5%
Foreign Imports	31.1%

#### **Electricity**

<b>√</b>	
In-State Production	76.6%
Natural Gas	33.4%
Nuclear	12.9%
Large Hydro	11.2%
Coal	9.8%
Oil	0.2%
Renewable	10.4%

#### **Natural Gas**

In State	16.3%
Canada	27.6%
Rockies	11.7%
Southwest	44.4%



Source: California Energy Commission



## Cabrillo Port Certainty and Reliability of Natural Gas Supply



- Source of Cabrillo Port Natural Gas is Australia, a Politically Stable U.S. Ally for 100 Years
- Australia is a Non-OPEC Country and has No Natural Gas Export Restrictions
- Australia has Stringent National Environmental Safeguards on Natural Gas Production
- Australian Gas is Not Subject to the Vagaries of a Government-Controlled Monopoly
- BHPB is Australia's Largest Company, and One of the World's Largest Diversified Natural Resources Companies



### Cabrillo Port Project Overview



- Import LNG from Australia
- Operate a LNG Floating Storage and Re-gasification Unit (FSRU)
   Approximately 21 miles Offshore Oxnard
- Subsea Natural Gas Pipeline into existing SoCalGas System near Ormond Beach
- Deliver about 800 Million Cubic Feet of Natural Gas Daily, About 11% of California's Average Daily Natural Gas Consumption
- Provide Secure Alternative Natural Gas Source Directly into California





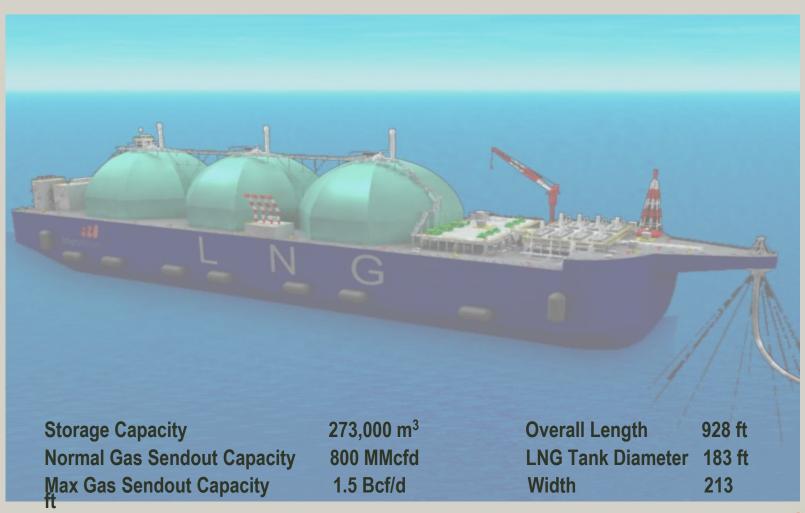
#### Why Choose This Site?

- Access to Southern California Gas Company's Existing Transmission & Distribution Networks
- Terrestrial Pipeline (SoCalGas) Routed Through Existing Easements, Predominantly Through Agricultural Fields
- The Remote Offshore Site
  - Provides an additional layer of security and safety
  - Ability to locate facility out of critical view shed
  - Minimal environmental foot print
  - Minimal societal impact



# Cabrillo Port Floating Storage & Regasification Unit







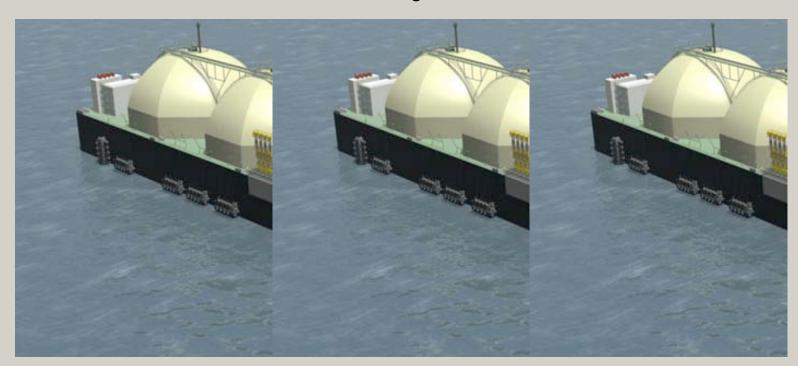


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### Floating Storage & Regasification Unit (FSRU)

# Proven Technologies

- Single Point Mooring
- Side by Side LNG Transfer
- Moss Spherical LNG Storage Tanks
- LNG Regasification



- Storage Capacity = 273,000 m3
- Length = 928ft
- Displacement ~ 210,000 DWT

- Anticipated Normal Throughput = 800 MMSCFD
- Design Throughput = 1,500 MMSCFD
- Permanently Turret Moored in 2,850' wd.

13



### **LNG Project Vicinities**







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#### What Community Leaders Are Saying...

"Energy prices continue to go up double digits year after year and senior citizens can't afford it. California needs new energy supplies such as liquefied natural gas to keep prices in check and home heating and cooling costs low. We need LNG, we need Cabrillo Port."

- Hank Lacayo, State President, Congress of California Seniors

"Finally, federal and state regulators have determined what we already know: that liquefied natural gas is safe. Out of all the proposed liquefied natural gas facilities, Cabrillo Port provides the strongest commitment to ensure public safety and protect our local community."

-- Tom Cady, Assistant Police Chief (Ret.), Oxnard City Police Department

"It's a fact: domestic natural gas supplies are dwindling and California needs new sources of affordable, reliable and safe natural gas to operate our businesses, warm our homes and cook our food."

Bob Guillen, Ventura County Building & Construction Trades Council

"California must import more than 85 percent of its natural gas. Conservation and renewable energy can only go so far. The delivery of liquefied natural gas is an essential natural gas supply option to fill the void to meet our state's growing energy needs."

- Dennis J. Aigner, Dean
Bren School of Environmental Science and Management, U.C.S.B.



### **Visual Simulation – Typical Conditions**



Photo simulation of the FSRU 14.04 miles offshore, under 16 typical marine layer conditions





### Visual Simulation – Night



Photo simulation of the FSRU 14.04 miles offshore, under nighttime conditions





#### **Project Benefits**

- Increases California's Natural Gas Supply Diversity
  - Reduces California's Reliance upon Interstate Pipeline Systems
  - Reduces California's Reliance on Declining Domestic Resources
  - Supply Diversity and Capacity Can Moderate Prices
  - Puts California at Front End of National Gas Distribution Network
- Smallest Environmental Footprint Possible
- Creates California-Based, Permanent Jobs
  - Operations Projected to Provide Annual Economic Benefit of \$25.5 Million
- Can California Have Too Much Supply?
  - Additional U.S. capacity is not guaranteed to come to CA
  - Baja LNG expected to add limited, unguaranteed supply to Western U.S.





#### Natural Gas - Clean & Safe

We all use natural gas. We use it in our homes, transportation, industry and in electricity generation.





#### Cabrillo Port

For more information on Cabrillo Port, please visit our websites:

www.lngsolutions.com

www.bhpbilliton.com

Thank You!

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